CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

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JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/VD/W.No.08/CSR-04/692b/CEMENT/2018-19 Date: 27.04.2018

TEST REPORT ON CEMENT

*** Customer**	:	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Mr. V. Dhananjaya,** No.41/C, 14th Cross, Mahalakshmi Layout, Bangalore - 86.
*** Name of Work**	:	Construction of culverts desilting and debris clearance in Ward No.08, Kodigehalli, BBMP, Bangalore.
*** Reference**	:	BBMP/EE/BTP/WO/72/2017-18 Dated: 27.02.2018
*** Sample ID**	:	Cement
Sample Received on	:	25.04.2018
Period of Testing	:	25.04.2018 to 27.04.2018

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988 (RA-2014)	28.50 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	190 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988 (RA-2014)	470 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988 (RA-2014)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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Job No.: CTCE/BBMP/VD/W.No.08/CSR-04/692b/SAND-Gradation/2018-19 27.04.2018

TEST REPORT ON SIEVE ANALYSIS OF FINE AGGREGATES

*** Customer**	:	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Mr. V. Dhananjaya,** No.41/C, 14th Cross, Mahalakshmi Layout, Bangalore - 86.
*** Name of Work**	:	Construction of culverts desilting and debris clearance in Ward No.08, Kodigehalli, BBMP, Bangalore.
*** Reference**	:	BBMP/EE/BTP/WO/72/2017-18 Dated: 27.02.2018
*** Sample ID**	:	Fine Aggregates (Manufactured Sand)
Technical Reference	:	IS : 2386 (Part 1) - 1963 (RA-2011)
Sample Received On	:	25.04.2018
Date of Testing	:	27.04.2018

Total Wt. of Aggregates in gms = **1000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	98.00	90-100	90-100	90-100	95-100
2.36	79.00	60-95	75-100	85-100	95-100
1.18	59.00	30-70	55-90	75-100	90-100
600 Micron	38.00	15-34	35-59	60-79	80-100
300 Micron	19.50	5-20	8-30	12-40	15-50
150 Micron	6.30	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-II specific limits.

Note 1 :

For crushed stone sands, the permissible limit on 150-micron IS Sieve is increased to 20 percent. This does not affect the 5 percent allowance permitted in 4.3 of IS 383 applying to other sieve sizes.

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Job No.: CTCE/BBMP/VD/W.No.08/CSR-04/692b/AGG/GR/2018-19 27.04.2018

TEST REPORT ON SIEVE ANALYSIS OF COARSE AGGREGATES

*** Customer**	:	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Mr. V. Dhananjaya,** No.41/C, 14th Cross, Mahalakshmi Layout, Bangalore - 86.
*** Name of Work**	:	Construction of culverts desilting and debris clearance in Ward No.08, Kodigehalli, BBMP, Bangalore.
*** Reference**	:	BBMP/EE/BTP/WO/72/2017-18 Dated: 27.02.2018
*** Sample ID**	:	Coarse Aggregates (40mm)
Technical Reference	:	IS : 2386 (Part 1) -1963 (RA-2011)
Sample Received on	:	25.04.2018
Date of Testing	:	27.04.2018

Total Wt. of Aggregates in gms= **5000**

IS Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2011)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.48	95-100	85-100
20	40.20	30-70	0-20
10	12.42	10-35	0-5
4.75	2.12	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under graded specific limits.

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Job No.: CTCE/BBMP/VD/W.No.08/CSR-04/692b/Cube/2018-19 16.06.2018

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer**	:	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Mr. V. Dhananjaya,** No.41/C, 14th Cross, Mahalakshmi Layout, Bangalore - 86.
*** Name of the work**	:	Construction of culverts desilting and debris clearance in Ward No.08, Kodigehalli, BBMP, Bangalore.
*** Reference**	:	BBMP/EE/BTP/WO/72/2017-18 Dated: 27.02.2018
*** Sample ID**	:	Cement Concrete
Technical Reference	:	IS: 516-1959 (RA-2013)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
*** Grade of Concrete**	:	M_{15}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	16.06.2018

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	19.05.2018	16.06.2018	8.231	379.8	16.88
2	19.05.2018	16.06.2018	8.310	395.4	17.57
3	19.05.2018	16.06.2018	8.456	408.2	18.14

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Job No.: CTCE/BBMP/VD/W.No.08/CSR-04/692b/SAND-Gradation/2018-19 21.05.2018

TEST REPORT ON SIEVE ANALYSIS OF FINE AGGREGATES

*** Customer**	:	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Mr. V. Dhananjaya,** No.41/C, 14th Cross, Mahalakshmi Layout, Bangalore - 86.
*** Name of Work**	:	Construction of culverts desilting and debris clearance in Ward No.08, Kodigehalli, BBMP, Bangalore.
***Reference**	:	BBMP/EE/BTP/WO/72/2017-18 Dated: 27.02.2018
***Sample ID**	:	Fine Aggregates (Sand Pointing)
Technical Reference	:	IS : 1542 - 1992 (RA-2014)
Sample Received on	:	19.05.2018
Date of Testing	:	21.05.2018

Total Wt. of Aggregates in gms **1000**

Is Sieved Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS : 1542 - 1992 (RA-2014) Clause 5.1
10	100	100
4.75	98.10	95-100
2.36	96.10	95-100
1.18	92.10	90-100
600 Micron	85.20	80-100
300 Micron	39.60	20-65
150 Micron	10.70	0-15

* Information is furnished by the Customer/Representative

Remarks : This tested sample satisfies requirement.

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Job No.: CTCE/BBMP/VD/W.No.08/CSR-04/692b/Precast slab/2018-19 30.05.2018

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CORE

*** Customer**	:	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Mr. V. Dhananjaya,** No.41/C, 14th Cross, Mahalakshmi Layout, Bangalore - 86.
*** Name of work**	:	Construction of culverts desilting and debris clearance in Ward No.08, Kodigehalli, BBMP, Bangalore.
*** Reference**	:	BBMP/EE/BTP/WO/72/2017-18 Dated: 27.02.2018
*** Sample ID**	:	Precast slab (250mm thick)
*** Grade of Concrete**	:	M_{20}
Techinical Reference	:	IS:516-1959 (RA- 2013), SP-24:1983.
Sample Received on	:	28.05.2018
Date of Testing	:	30.05.2018

Sl. No	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	81.00	0.401	2521.33	1.62	0.959	30.25	15.41	16.64	17.35	21.69
2	50.00	82.00	0.403	2503.00	1.64	0.961	33.80	17.21	18.59	17.87	22.34
3	50.00	83.00	0.416	2552.62	1.66	0.963	34.60	17.62	19.03	18.33	22.92

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